

Comparison of Head Impact Magnitudes and Frequencies Between Intercollegiate Men's and Women's Lacrosse Players

Research studies have examined effects of player position and type of play on head impacts in intercollegiate football players, but no similar data exists for lacrosse players.

The purpose of this study is to compare magnitude and frequency of head impacts between lacrosse players based on player position and type of play. Thirty one National Collegiate Athletic Association (NCAA) Division III lacrosse players, 15 women and 16 men, wore xPatch sensors (X2 Biosystems, Seattle, WA) for all games and practices during the 2015 season. The frequencies and magnitudes (linear and angular accelerations) of head impacts for each individual player were measured. We found sex, position, and type of play did alter the combined dependent variables. In women, defensive plays had the highest number of impacts, while in men offensive plays had the highest number of impacts. Women's lacrosse defenders were most likely to sustain a head impact and in men, midfielders were most likely to have head impacts. Identifying player positions and activities during sports that are prone to head impacts may allow effective implementation of strategies to reduce head impacts and improve safety.